(ii) At the TIFR Nodal Centre, some progress has been made in the hidden Markov mode and expert system approach for Speech Recognition.

(iii) At Nationa' Cenire for Software Technology (NCST), an expert system shell and simple implementation of WSP have been developed. Experi Systems for card'ac arrested solution of simultaneous equations development have also been doveloped.

(iv) At Indin Institute *cf* Technology (IIT), Madras Ned 1 Centre, expert systems information, health and planning and for engineering sign and trouble shooting, for auiomatitc process planning are being developed.

(v) At the Indian. Statistical Institute (ISI) N dal Cen' e, project on geographical mapping along with GSI has ben completed and another one o*n t*he industrial inspection system is undei way.

(vi) At the Department of Electronics (DOE) N dal Centre, an expert system for Inc me- ax assessment has been d signed and developed. It is new under extensive testing. Work in the Logic Programming,has also begun at this cetre fur legal reasoning sppliaatirin in the Government.

(b) Research in Natural Language at NCST is in 2 broad areas.

(i) Man-machine communication using natural language ;

(ii) Human aided machine translation (fiom English to Hindi for a limiied subset cf language using a limited vocabulary).

NCST has emphasised the use of interaction alongwith the Aitificial Intelligence to obviate psoblems in Natural Language under landing. Knowledge represent ation scheme Used ncludes frame like predicative strunnres. The group at NCST is not fully convmced about Sanskrit as a pactical formalism for knowledge repvesem alien.

(c) A specific project on Sanskrit as a c mputor language for arti ficial gence has not yet been formul ted unde the FGCS/KBCS Progromme.

**Dam over Rives Mahanadi**

*460. SHRI KAHNU CHARAN LENKA : Will the Minister of WATER RESOURCES be pleased to state :

(a) whether any scheme has been received from the Orissa Government to construct a dam on river Mahanandi downstream of Hirakund Dam;

(b) if so, what are the details thereof; and

(c) by when the work on it is likely to be started?

THE MINISTER OF LAW AND JUSTICE AND THE MINISTER OF WATER RESOURCES (SHRI B. SHANKARANAND): (a) and (b) Yes, Sir. The project estimated to cost Rs. 1103 crores envisages flood protection to an area of about 6.57 lakh -hectares besides installed power capacity of 960 MW

(c) The project has not been included in the Seventh Five Year Plan.